DEVAL L. PATRICK
GOVERNOR

TIMOTHY P. MURRAY
LIEUTENANT GOVERNOR

JUDYANN BIGBY, MD
SECRETARY

JOHN AUERBACH
COMMISSIONER

Kathryn Hinman, ADA

Suffolk County District Attorney's Office
By e-mail                                                          May 3, 2011

Re: Comm. v. ███████████ State Lab nos. ████████ and ████████

ADA Hinman,
Please find enclosed a discovery packet for the case noted above. The material is collated in the following manner:

1) the chemists' c.v.'s
2) the evidence office receipt to the Boston Police
2) inventory control cards for the submissions
3) the bench notes on the "Drug Powder Analysis Forms"
4) the gas chromatography/mass spectrometry (gc/ms) data

I was the custodial chemist responsible for weighing the sample and performing the preliminary tests. Ms. Corbett performed the gas chromatography/mass spectrometry (gc/ms). If you need further clarification of this material, please call me directly at (617) 983-6627.

Sincerely,

Michael Lawler
Senior Chemist

Cc: Charles Salemi, Kate Corbett

# Curriculum Vitae

## Michael Lawler

**Education:**

University of Virginia, Charlottesville, Va. Bachelor of Arts in English, 1975

Harvard University, Cambridge, Ma. Master of Arts in biology, 1995

**Experience:**

**1990-present** currently Chemist III, Mass. Dept. of Public Health, Drug Lab analyst determining the identity of unknown substances and providing expert testimony in the Courts. Conduct special testing for poisons within drug exhibits.

**2005-present** lecturer in chemistry, Curry College, Milton, Ma.

**1988-1990** New England Newborn Screening (NENS) Biochemist conducting pilot studies and validation trials of new newborn screening tests. Investigator and co-author of papers noted below. Introduced screening test for Biotinidase Deficiency. Liaison with interstate collaborators in national studies.

**1983-1988** Supervised NENS urine screening lab for metabolic disorders. Conducted research in collaboration with Children's Hospital (Boston) detecting neuroblastoma, a cancer of early childhood. Conducted reference testing for rare metabolic disorders for an international audience.

**1982-1983** NENS hypothyroid assay technologist with Tuft's University

**1979-1981** Mass. Bay Community College, staff technologist preparing materials for the laboratory technician program, which included reagents, apparatus and maintaining stock cultures of human pathogens.

**Additional education and special training**

Drug Analysis, completed six week training course by senior staff within the
Department of Public Health Drug Analysis Laboratory

National Laboratory Network Training Program course as Expert Witness

Qualified as an expert witness in the Massachusetts Courts and the U.S. District Court

CDC course in cell culture

CDC course in antibiotic resistance

CDC course in public health response to bioterrorism

U.S. Army course in biologic warfare and terrorism

**Journal Publications**

*Screening*, 1992, 1:34-37; Lawler,M., Frederick,S., Rodriguez-Anza, S.,Wolf,B., Levy,H., *Newborn Screening for Biotinidase Deficiency, Pilot Study and Follow-up of Identified Cases*

*Genetic Screening*, 1990, 11-18, Mitchell,M., Lawler,M., Walraven,C., Hermos,R., *To Screen or Not to Screen for Congenital Hyperplasia: Is that the Question?*

*The Journal of Pediatrics*, 116: 78-83, Secor-McVoy,J., Lawler,M., Schmidt, M., Ebers,D., Hart,P., Pettit,D., Blitzer,M.,Wolf,B., *Partial Biotinidase Deficiency: Clinical and Biochemical Features*

**Professional Affiliations**

Northeastern Association of Forensic Scientists (NEAFS) since 2005

**Awards**

Theobald Smith Education Grant for graduate studies

# Curriculum Vitae

Kate A. Corbett

## Education

**Bachelor of Science Degree, CHEMISTRY  May 2003**
MERRIMACK COLLEGE
Coursework included: Organic Chemistry, Inorganic Chemistry, Quantitative Analysis, Instrumental Analysis, Physical Chemistry, Physics, Calculus

---

## Employment

**Chemist II State Laboratory Institute (March 2008-Present)**
Massachusetts Department of Public Health
Drug Analysis Laboratory

> Responsible for the identification of substance and trafficking substances to determine violation of the Massachusetts drug laws
> Responsible for the identification of pharmaceuticals to determine violation of the Massachusetts drug laws
> Operate analytical instrumentation, microscopes and balances for forensic drug analysis

**Chemist I State Laboratory Institute (2005-March 2008)**
Massachusetts Department of Public Health
Drug Analysis Laboratory

> Responsible for the identification of substance to determine violation of the Massachusetts drug laws
> Operate analytical instrumentation for the purpose of performing forensic drug analysis
> Successfully completed an eight week training course in the analysis of drugs conducted by senior staff of the Department of Public Health, Drug Analysis Laboratory
> Appointed an assistant analyst for the Department of Public Health, Drug Analysis Laboratory in 2005

**Research Associate (September 2003 – August 2005)**
SENSOR TECHNOLOGIES, INC. - Shrewsbury, MA

> Prepared chemistries used in making sensor beads
> Generated and examined sensors employing fluorescence spectroscopy
> Performed protein, dye and sugar assays using UV/VIS spectrophotometry
> Carried out titrations on ricin using fluorescence correlation spectroscopy
> Statistical analysis of experimental data

**Intern  (March 2003 – August 2003)**
MASSACHUSETTS STATE POLICE CRIME LABORATORY - Sudbury, MA

> Assisted in the gathering of case files to fulfill the National Institute of Justice's No Suspect Backlog Reduction Grant
> Observed in the Evidence, Criminalistics, DNA, Drug, Trace, Toxicology, and Bomb/Arson Units

# BostonPolice
### DEPARTMENT

## DRUG RECEIPT

CC # ███████████

BOOK # G5

PAGE # 42

DESTRUCTION # _____

District/Unit DCU D-4

Name & Rank of Arresting Officer  Robert Walsh, P.O.          ID# 10794

| DEFENDANT'S NAME | ADDRESS | CITY | STATE |
|---|---|---|---|
| ████████████████████████ | | Roxbury | ma |

| DESCRIPTION OF ITEMS SUBMITTED | GROSS QUANTITY | LAB USE ONLY | |
|---|---|---|---|
| | | GROSS WEIGHT | ANALYSIS NUMBER |
| Crack cocaine | 3 P/B's | 1.97g | ████████████ |
| crack cocaine | 31 P/B's | 9.54g | |
| Marijuana        CIVIL | 1 P/B | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

**To be completed by ECU personnel only**

Name and Rank of Submitting Officer  PO Llepian          ID# 12015

Received by  ECU          Date  6-23-10

ECU Control # _____

BPD Form 0038-BIS-0907 (prev. 1753)

No. ▉▉▉▉▉▉     Date Analyzed: 7/27/10

City: Boston D.C.U. Police Dept.

Officer: P.O. MILA DEPINA

Def: ▉▉▉▉▉▉▉▉▉▉

Amount:

Subst: SUB

No. Cont: 3    Cont: pb

Date Rec'd: 06/23/2010

Gross Wt.: 1.97

No. Analyzed: 1

Net Weight: 0.11 g

# Tests: 2/MK
2/CAC

Prelim: COCAINE (K)   Findings: Cocaine

---

No. ▉▉▉▉▉▉     Date Analyzed: 7/27/10

City: Boston D.C.U. Police Dept.

Officer: P.O. MILA DEPINA

Def: ▉▉▉▉▉▉▉▉▉▉

Amount: ▉▉▉▉▉▉▉▉▉▉

Subst: SUB

No. Cont: 31    Cont: pb

Date Rec'd: 06/23/2010

Gross Wt.: 9.54

No. Analyzed: 4

Net Weight: 0 4.32 g

# Tests: 36/MK
8/CAC

Prelim: COCAINE (K)   Findings: Cocaine

GC/MS
G072610.5

GC/MS
G072610.5

# DRUG POWDER ANALYSIS FORM

SAMPLE # ███████████  AGENCY Bkn DM  ANALYST /ML

No. of samples tested: 4  Evidence Wt. 9.54g

PHYSICAL DESCRIPTION:

31 pb w/sub

Gross Wt ( ): 5.1445

Gross Wt ( ): _____

Pkg. Wt: _____

Net Wt: 4.3245

OHAUS 2334 7-23-10

$20g = 20.0001g$

$10g = 10.0000g$

$5g = 5.0001g$

$1g = 0.9999g$

---

## PRELIMINARY TESTS
### Spot Tests

Cobalt Thiocyanate ( ) (+) (−) x 4

Marquis _____ (−)

Froehde's _____ (−)

Mecke's _____ (−)

## Microcrystalline Tests

Gold Chloride (+) x 4

TLTA (+) (−)

## OTHER TESTS

_____

_____

_____

---

## PRELIMINARY TEST RESULTS

RESULTS _____

DATE _____

## GC/MS CONFIRMATORY TEST

RESULTS Cocaine

MS OPERATOR KAC

DATE 7/27/10

Sample #: _____

# samples to _____

| | Weight | Net Weight | # | Gross Weight | Packet Weight | Net Weight |
|---|---|---|---|---|---|---|
| | | 0.1715 | 26 | | | |
| | | 0.1426 | 27 | | | |
| | | 0.1194 | 28 | | | |
| | | 0.1248 | 29 | | | |
| | | | 30 | | | |
| | | | 31 | | | |
| | | | 32 | | | |
| | | | 33 | | | |
| | | | 34 | | | |
| | | | 35 | | | |
| | | | 36 | | | |
| 12 | | | 37 | | | |
| 13 | | | 38 | | | |
| 14 | | | 39 | | | |
| 15 | | | 40 | | | |
| 16 | | | 41 | | | |
| 17 | | | 42 | | | |
| 18 | | | 43 | | | |
| 19 | | | 44 | | | |
| 20 | | | 45 | | | |
| 21 | | | 46 | | | |
| 22 | | | 47 | | | |
| 23 | | | 48 | | | |
| 24 | | | 49 | | | |
| 25 | | | 50 | | | |

Calculations:

$0.1715 +$
$0.1426 +$
$0.1194 +$
$0.1248 +$
$0.1583 \div$
$4 =$
$0.1395 *$

$0.1395 \times$
$31 =$
$4.3245 *$

$0 \cdot c$
$0 \cdot d$

# DRUG POWDER ANALYSIS FORM

SAMPLE # ▓▓▓▓▓▓▓  AGENCY _Boston DCU_  ANALYST _MX_

No. of samples tested: _1_  ▓▓▓▓▓▓▓  Evidence Wt. _1.97_

## PHYSICAL DESCRIPTION:

_3 pb w/ substance_

Gross Wt ( ): _0.4097_

Gross Wt ( ): _____

Pkg. Wt: _____

Net Wt: _0.1129_

OHAUSS 2334   7-22-10
20g = 20.0001g
10g = 10.0000g
5g = 5.0001g
1g = 0.9998g

## PRELIMINARY TESTS
### Spot Tests

Cobalt Thiocyanate (+) H+ (−)

Marquis (−)

Froehde's (−)

Mecke's (−)

## Microcrystalline Tests

Gold Chloride (+)

TLTA (+) H+ (−)

## OTHER TESTS

_____

_____

_____

## PRELIMINARY TEST RESULTS

RESULTS _____

DATE _____

## GC/MS CONFIRMATORY TEST

RESULTS _Cocaine_

MS OPERATOR _KAC_

DATE _7/27/10_

Revised 7/2005

Sample #: _____

# samples tested: _____

| # | Gross Weight | Packet Weight | Net Weight | # | Gross Weight | Packet Weight | Net Weight |
|---|---|---|---|---|---|---|---|
| 1 | | | | 26 | | | |
| 2 | | | | 27 | | | |
| 3 | | | | 28 | | | |
| 4 | | | | 29 | | | |
| 5 | | | | 30 | | | |
| 6 | | | | 31 | | | |
| 7 | | | | 32 | | | |
| 8 | | | | 33 | | | |
| 9 | | | | 34 | | | |
| 10 | | | | 35 | | | |
| 11 | | | | 36 | | | |
| 12 | | | | 37 | | | |
| 13 | | | | 38 | | | |
| 14 | | | | 39 | | | |
| 15 | | | | 40 | | | |
| 16 | | | | 41 | | | |
| 17 | | | | 42 | | | |
| 18 | | | | 43 | | | |
| 19 | | | | 44 | | | |
| 20 | | | | 45 | | | |
| 21 | | | | 46 | | | |
| 22 | | | | 47 | | | |
| 23 | | | | 48 | | | |
| 24 | | | | 49 | | | |
| 25 | | | | 50 | | | |

Calculations:

√ 5-3-11 /MM/

Information from Data File:
```
File Name        : C:\msdchem\1\System7\07_26_10\733141.D
Operator         : ASD
Date Acquired    : 26 Jul 2010  22:22
Sample Name      : BLANK
Submitted by     :
Vial Number      :   1
AcquisitionMeth: DRUGS.M
Integrator       : RTE
```
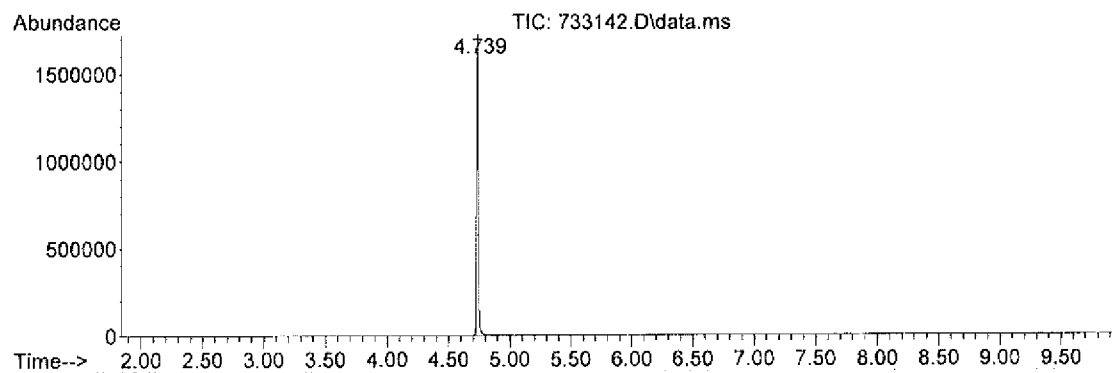
Abundance                          TIC: 733141.D\data.ms

1000

500

0
Time-->   2.00  2.50  3.00  3.50  4.00  4.50  5.00  5.50  6.00  6.50  7.00  7.50  8.00  8.50  9.00  9.50

Ret. Time              Area        Area  %      Ratio %

***NO INTEGRATED PEAKS***

733141.D           Tue May 03 14:03:53 2011              Page  1

Area Percent / Library Search Report

---

Information from Data File:
File Name      : C:\msdchem\1\System7\07_26_10\733142.D
Operator       : ASD
Date Acquired  : 26 Jul 2010   22:34
Sample Name    : COCAINE STD
Submitted by   :
Vial Number    :  42
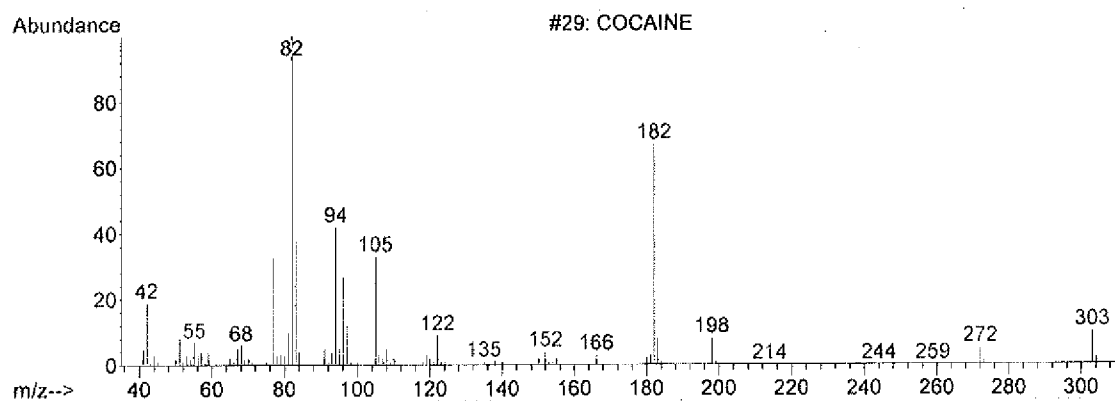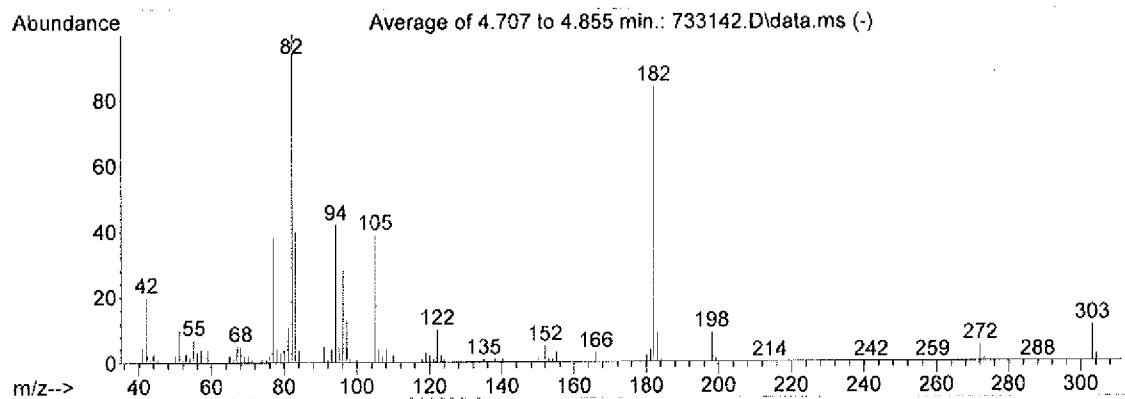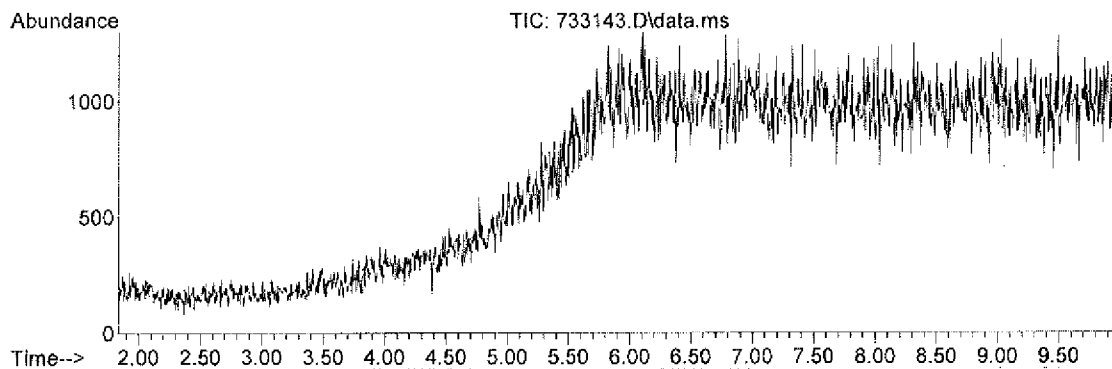AcquisitionMeth: DRUGS.M
Integrator     : RTE

---

Abundance                        TIC: 733142.D\data.ms
                              4.739
 1500000

 1000000

  500000

        0
Time-->   2.00  2.50  3.00  3.50  4.00  4.50  5.00  5.50  6.00  6.50  7.00  7.50  8.00  8.50  9.00  9.50

---

| Ret. Time | Area | Area % | Ratio % |
|-----------|------|--------|---------|
| 4.739 | 1563758 | 100.00 | 100.00 |

---

733142.D          Tue May 03 14:04:07 2011          Page  1

# Area Percent / Library Search Report

Information from Data File:
```
File Name        : C:\msdchem\1\System7\07_26_10\733142.D
Operator         : ASD
Date Acquired    : 26 Jul 2010   22:34
Sample Name      : COCAINE STD
Submitted by     :
Vial Number      :  42
AcquisitionMeth: DRUGS.M
Integrator       : RTE
```

Search Libraries:    C:\Database\SLI.L            Minimum Quality: 80
                     C:\Database\NIST05a.L        Minimum Quality: 80
                     C:\Database\PMW_TOX2.L

| PK# | RT | Library/ID | CAS# | Qual |
|-----|-----|-----------|------|------|
| 1 | 4.74 | C:\Database\SLI.L | | |
| | | COCAINE | 000050-36-2 | 99 |



Average of 4.707 to 4.855 min.: 733142.D\data.ms (-)



#29: COCAINE

Area Percent / Library Search Report

Information from Data File:
File Name      : C:\msdchem\1\System7\07_26_10\733143.D
Operator       : ASD
Date Acquired  : 26 Jul 2010  22:47
Sample Name    : BLANK
Submitted by   : MGL
Vial Number    :   2
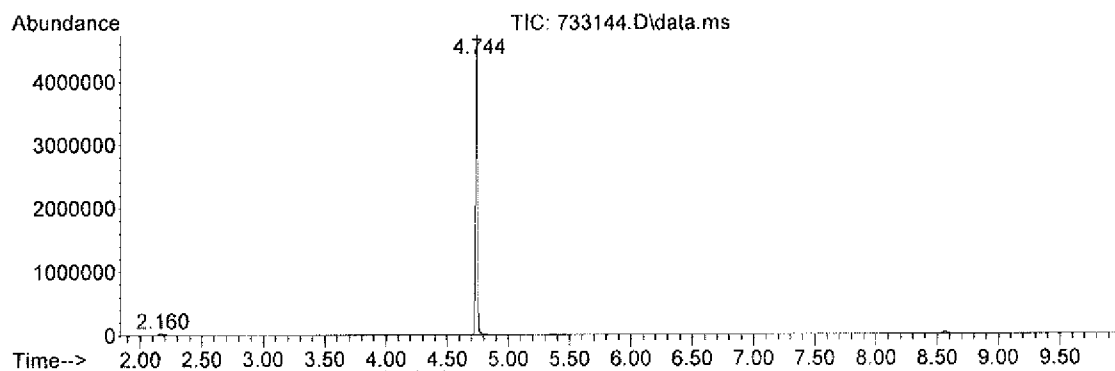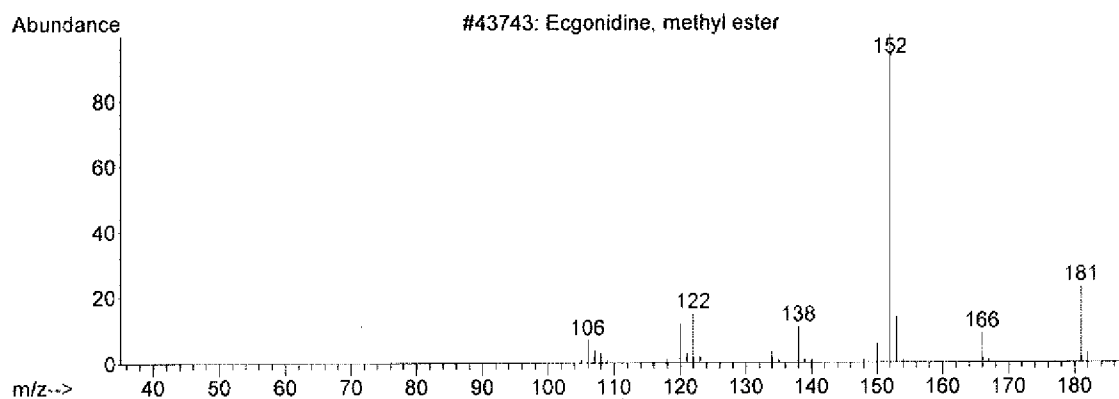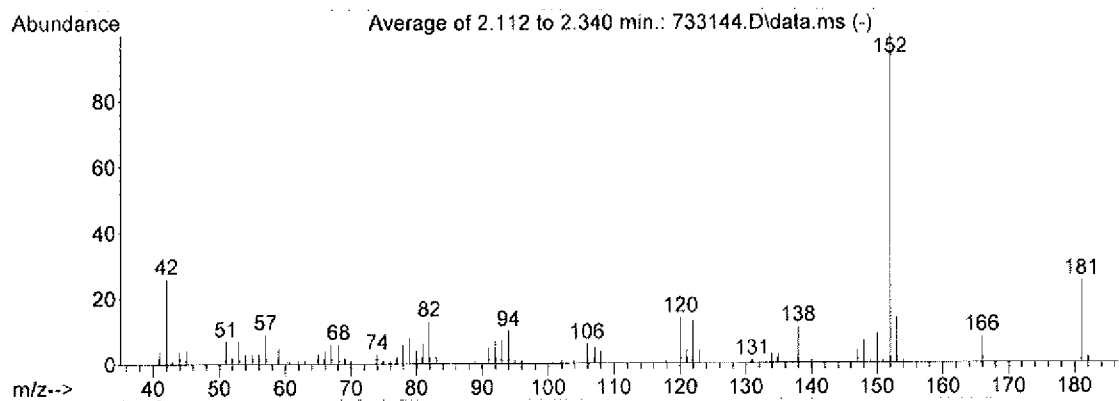AcquisitionMeth: DRUGS.M
Integrator     : RTE



Ret. Time              Area      Area  %    Ratio %

***NO INTEGRATED PEAKS***

733143.D          Tue May 03 14:04:13 2011          Page  1

Information from Data File:
File Name      : C:\msdchem\1\System7\07_26_10\733144.D
Operator       : ASD
Date Acquired  : 26 Jul 2010   22:59
Sample Name    : ███████████
Submitted by   : MGL
Vial Number    :  44
AcquisitionMeth: DRUGS.M
Integrator     : RTE

Abundance                          TIC: 733144.D\data.ms
                              4.744

4000000

3000000

2000000

1000000

          2.160
       0
Time-->   2.00  2.50  3.00  3.50  4.00  4.50  5.00  5.50  6.00  6.50  7.00  7.50  8.00  8.50  9.00  9.50

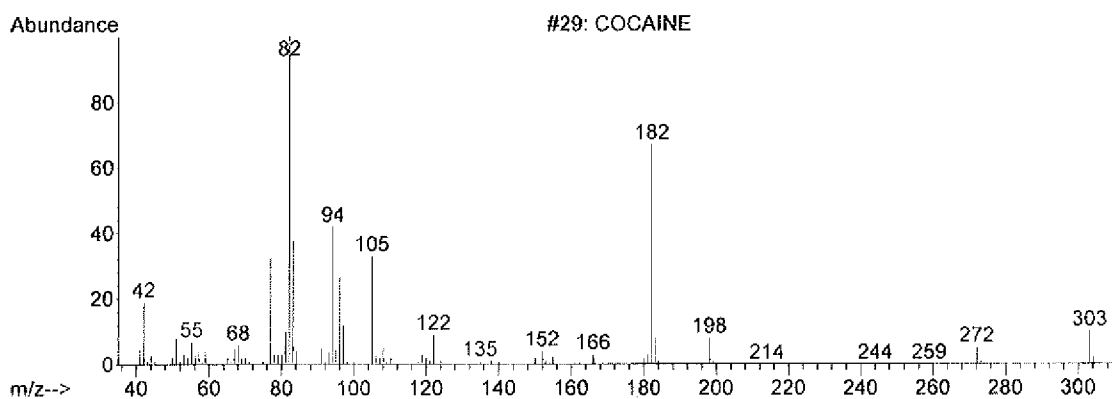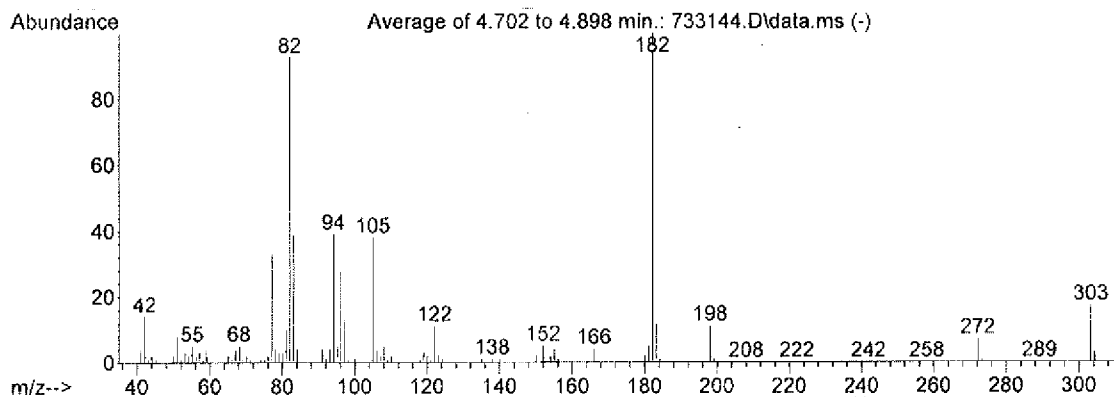| Ret. Time | Area | Area % | Ratio % |
|-----------|------|--------|---------|
| 2.160 | 115026 | 2.30 | 2.36 |
| 4.744 | 4875505 | 97.70 | 100.00 |

Information from Data File:
File Name      : C:\msdchem\1\System7\07_26_10\733144.D
Operator       : ASD
Date Acquired  : 26 Jul 2010   22:59
Sample Name    : ███████████
Submitted by   : MGL
Vial Number    : 44
AcquisitionMeth: DRUGS.M
Integrator     : RTE

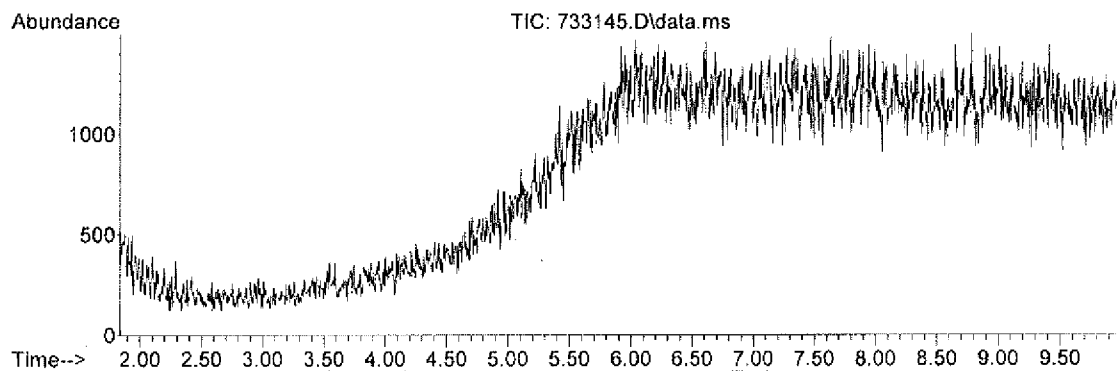Search Libraries:   C:\Database\SLI.L              Minimum Quality: 80
                    C:\Database\NIST05a.L          Minimum Quality: 80
                    C:\Database\PMW_TOX2.L

| PK# | RT | Library/ID | CAS# | Qual |
|-----|----|------------|------|------|
| 1 | 2.16 | C:\Database\NIST05a.L | | |
| | | Ecgonidine, methyl ester | 127379-24-2 | 94 |
| | | 2-Carbomethoxy-8-methyl-8-azabicycl | 043021-26-7 | 70 |
| | | 2,6-Dimethoxytoluene | 005673-07-4 | 43 |



Abundance — Average of 2.112 to 2.340 min.: 733144.D\data.ms (-)



Abundance — #43743: Ecgonidine, methyl ester

---

Information from Data File:
File Name       : C:\msdchem\1\System7\07_26_10\733144.D
Operator        : ASD
Date Acquired   : 26 Jul 2010  22:59
Sample Name     : ███████
Submitted by    : MGL
Vial Number     :  44
AcquisitionMeth: DRUGS.M
Integrator      : RTE

---

Search Libraries:   C:\Database\SLI.L          Minimum Quality: 80
                    C:\Database\NIST05a.L       Minimum Quality: 80
                    C:\Database\PMW_TOX2.L

| PK# | RT | Library/ID | CAS# | Qual |
|---|---|---|---|---|
| 2 | 4.74 | C:\Database\SLI.L | | |
| | | COCAINE | 000050-36-2 | 99 |



Average of 4.702 to 4.898 min.: 733144.D\data.ms (-)



#29: COCAINE

# Area Percent / Library Search Report

---

Information from Data File:
```
File Name        : C:\msdchem\1\System7\07_26_10\733145.D
Operator         : ASD
Date Acquired    : 26 Jul 2010  23:12
Sample Name      : BLANK
Submitted by     : MGL
Vial Number      :   2
AcquisitionMeth: DRUGS.M
Integrator       : RTE
```
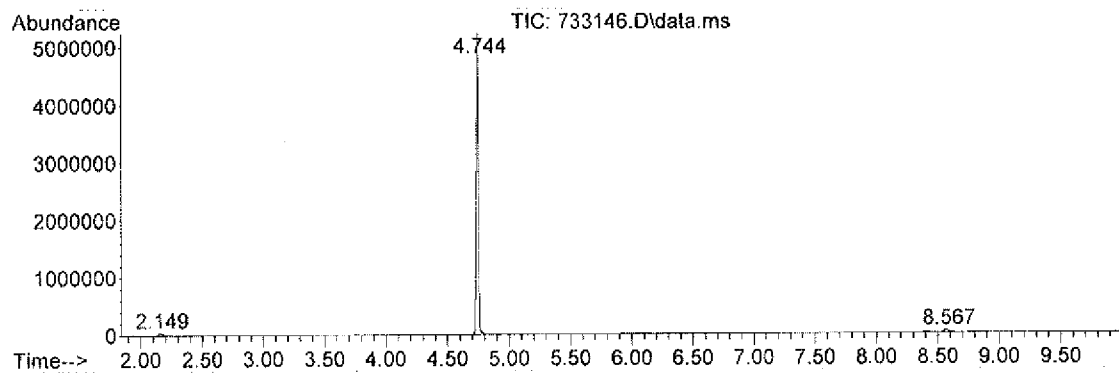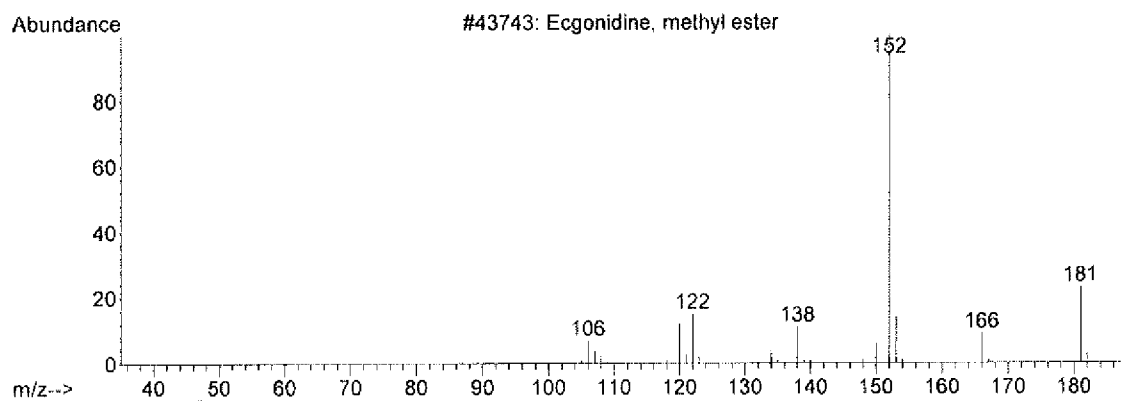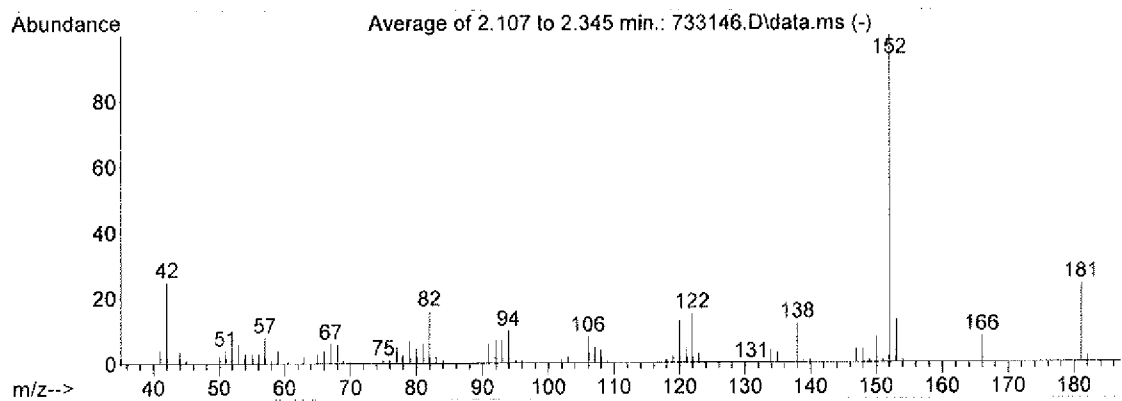
---



TIC: 733145.D\data.ms

---

| Ret. Time | Area | Area % | Ratio % |
|-----------|------|--------|---------|

---

***NO INTEGRATED PEAKS***

Area Percent / Library Search Report

---

Information from Data File:
File Name        : C:\msdchem\1\System7\07_26_10\733146.D
Operator         : ASD
Date Acquired    : 26 Jul 2010   23:25
Sample Name      : █████████
Submitted by     : MGL
Vial Number      : 46
AcquisitionMeth: DRUGS.M
Integrator       : RTE

---

Abundance                        TIC: 733146.D\data.ms
5000000              4.744
4000000
3000000
2000000
1000000
       2.149                                              8.567
     0
Time-->  2.00  2.50  3.00  3.50  4.00  4.50  5.00  5.50  6.00  6.50  7.00  7.50  8.00  8.50  9.00  9.50

---

Ret. Time          Area      Area %    Ratio %

---

2.149             146214      2.38      2.49
4.744            5862570     95.33    100.00
8.567             141097      2.29      2.41

---

733146.D          Tue May 03 14:05:24 2011          Page  1
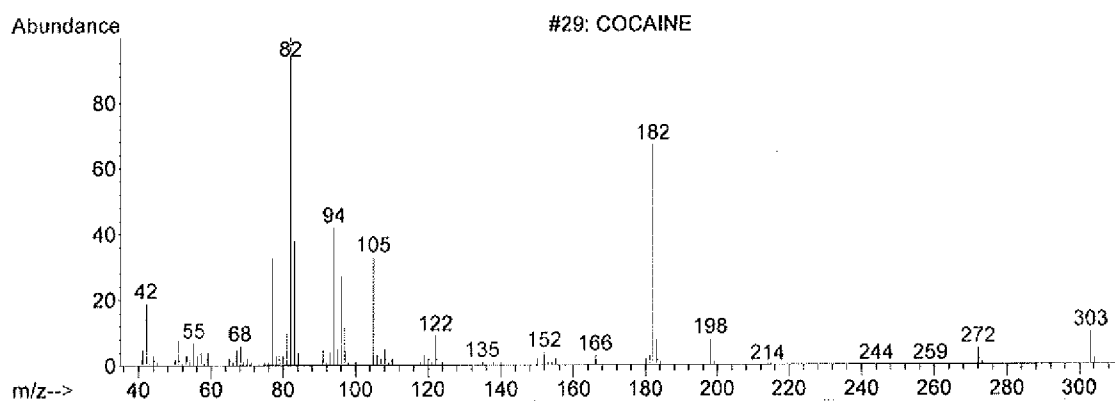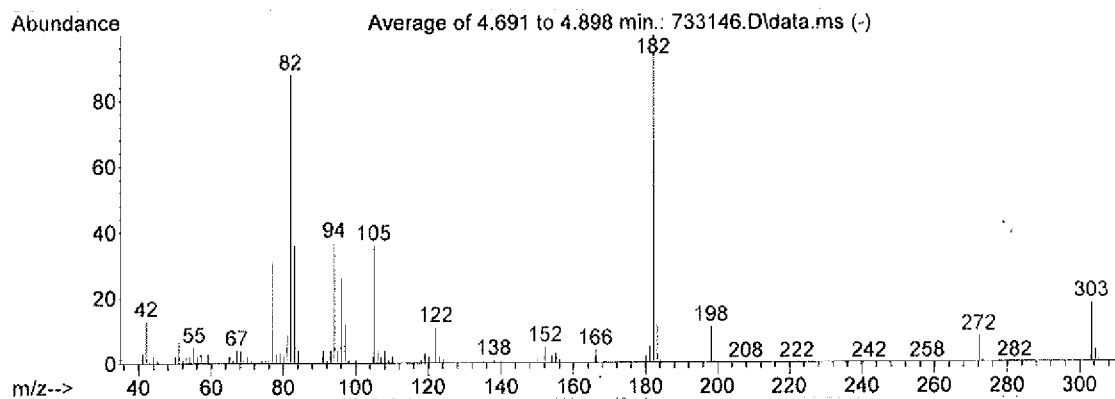
Information from Data File:
File Name       : C:\msdchem\1\System7\07_26_10\733146.D
Operator        : ASD
Date Acquired   : 26 Jul 2010   23:25
Sample Name     : ███████████
Submitted by    : MGL
Vial Number     : 46
AcquisitionMeth : DRUGS.M
Integrator      : RTE

Search Libraries:   C:\Database\SLI.L              Minimum Quality: 80
                    C:\Database\NIST05a.L          Minimum Quality: 80
                    C:\Database\PMW_TOX2.L

| PK# | RT | Library/ID | CAS# | Qual |
|---|---|---|---|---|
| 1 | 2.15 | C:\Database\NIST05a.L | | |
| | | Ecgonidine, methyl ester | 127379-24-2 | 97 |
| | | 2-Carbomethoxy-8-methyl-8-azabicycl | 043021-26-7 | 95 |
| | | 3,5-Dimethoxyphenethylamine | 003213-28-3 | 49 |

Abundance        Average of 2.107 to 2.345 min.: 733146.D\data.ms (-)



m/z-->

Abundance        #43743: Ecgonidine, methyl ester



m/z-->

733146.D          Tue May 03 14:05:25 2011          Page   2
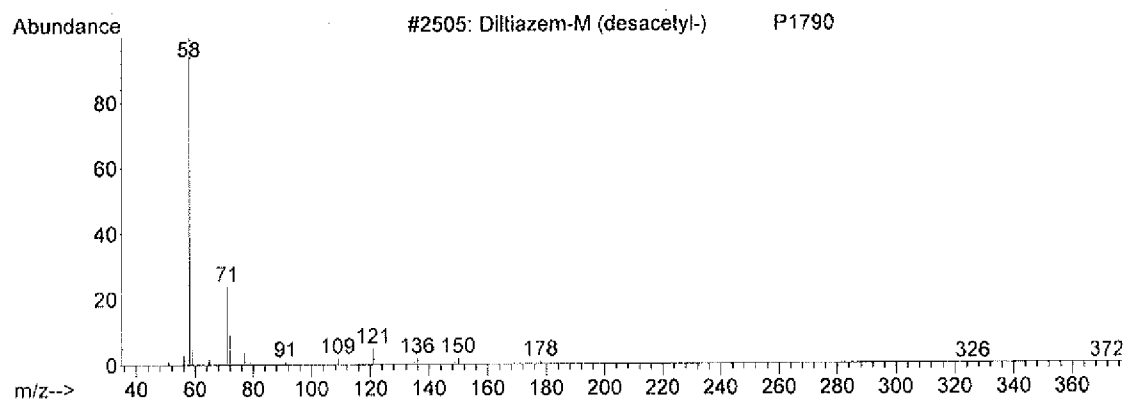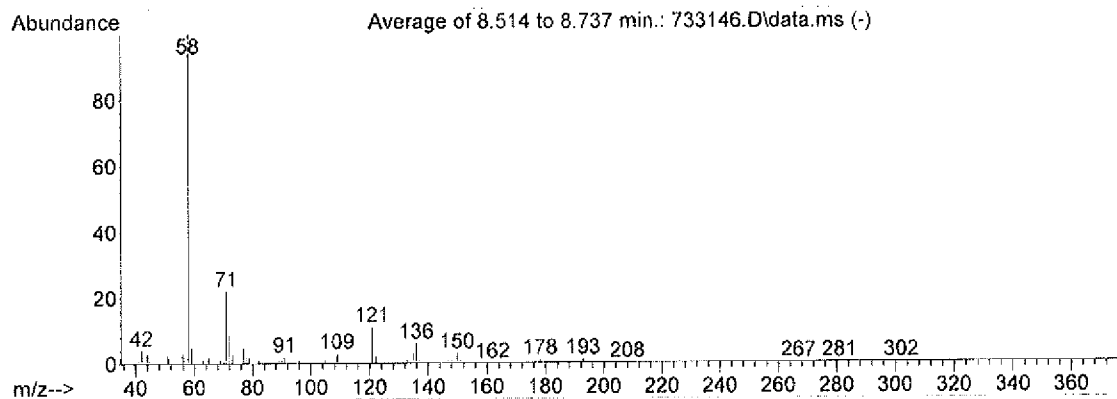
**Corbett_email_PRR_011436**

Information from Data File:
File Name      : C:\msdchem\1\System7\07_26_10\733146.D
Operator       : ASD
Date Acquired  : 26 Jul 2010  23:25
Sample Name    : ████████████
Submitted by   : MGL
Vial Number    : 46
AcquisitionMeth: DRUGS.M
Integrator     : RTE
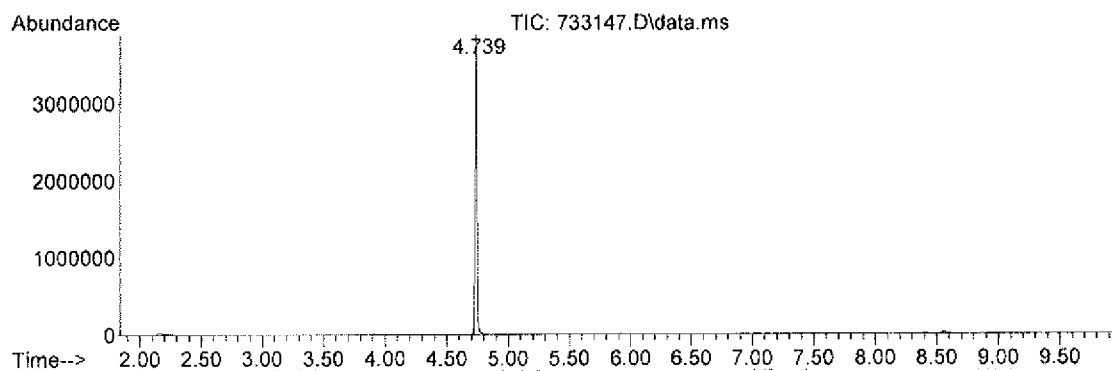
Search Libraries:  C:\Database\SLI.L           Minimum Quality: 80
                   C:\Database\NIST05a.L        Minimum Quality: 80
                   C:\Database\PMW_TOX2.L

| PK# | RT | Library/ID | CAS# | Qual |
|-----|-----|-----------|------|------|
| 2 | 4.74 | C:\Database\SLI.L | | |
| | | COCAINE | 000050-36-2 | 99 |



Average of 4.691 to 4.898 min.: 733146.D\data.ms (-)



#29: COCAINE

Information from Data File:
File Name       : C:\msdchem\1\System7\07_26_10\733146.D
Operator        : ASD
Date Acquired   : 26 Jul 2010  23:25
Sample Name     : ██████████
Submitted by    : MGL
Vial Number     : 46
AcquisitionMeth: DRUGS.M
Integrator      : RTE

Search Libraries:   C:\Database\SLI.L          Minimum Quality: 80
                    C:\Database\NIST05a.L       Minimum Quality: 80
                    C:\Database\PMW_TOX2.L

| PK# | RT | Library/ID | CAS# | Qual |
|-----|-----|-----|-----|-----|
| 3 | 8.57 | C:\Database\PMW_TOX2.L | | |
| | | Diltiazem-M (desacetyl-) | 000000-00-0 | 72 |
| | | Diltiazem | 042399-41-7 | 56 |
| | | BDB | 000000-00-0 | 50 |

Abundance          Average of 8.514 to 8.737 min.: 733146.D\data.ms (-)



Abundance          #2505: Diltiazem-M (desacetyl-)        P1790



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**Corbett_email_PRR_011438**

# Area Percent / Library Search Report

Information from Data File:
```
File Name       : C:\msdchem\1\System7\07_26_10\733147.D
Operator        : ASD
Date Acquired   : 26 Jul 2010   23:37
Sample Name     : ███████████
Submitted by    : MGL
Vial Number     : 47
AcquisitionMeth : DRUGS.M
Integrator      : RTE
```

Abundance          TIC: 733147.D\data.ms

```
                         4.739
3000000

2000000

1000000

        0
Time-->  2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50 7.00 7.50 8.00 8.50 9.00 9.50
```

| Ret. Time | Area    | Area %  | Ratio %  |
|-----------|---------|---------|----------|
| 4.739     | 3787672 | 100.00  | 100.00   |

Information from Data File:
File Name      : C:\msdchem\1\System7\07_26_10\733147.D
Operator       : ASD
Date Acquired  : 26 Jul 2010  23:37
Sample Name    : ███████████
Submitted by   : MGL
Vial Number    : 47
AcquisitionMeth: DRUGS.M
Integrator     : RTE

---
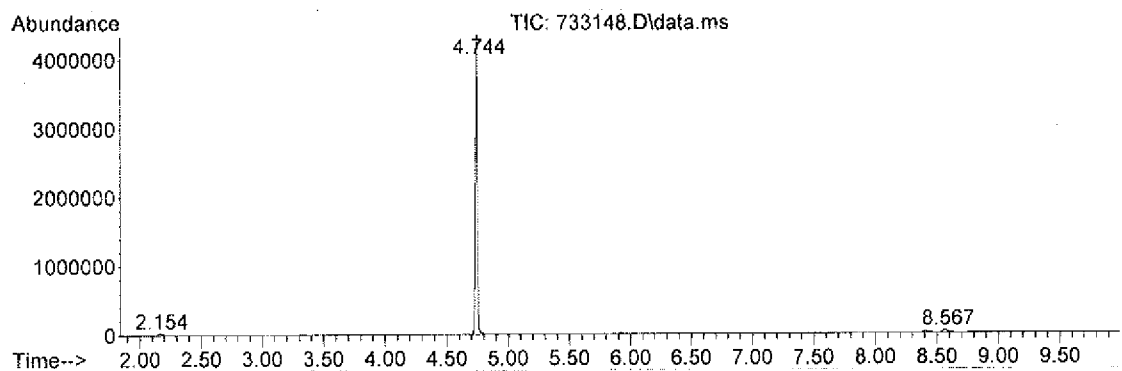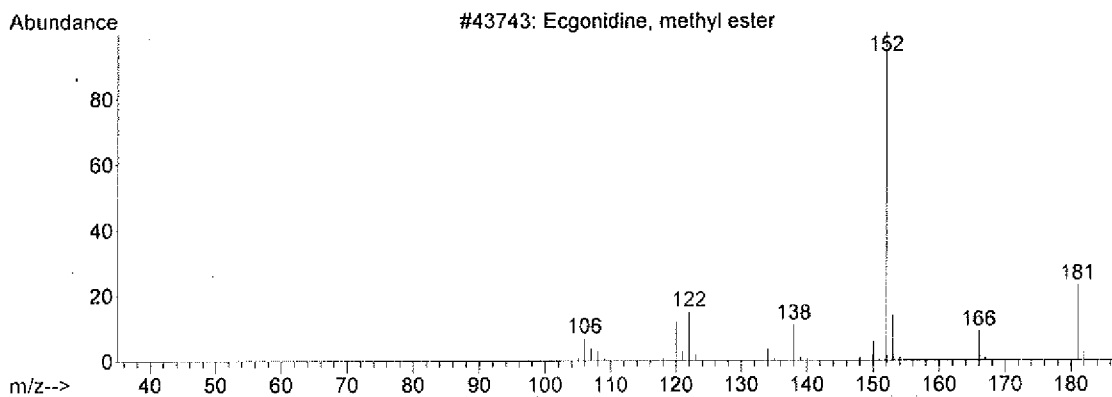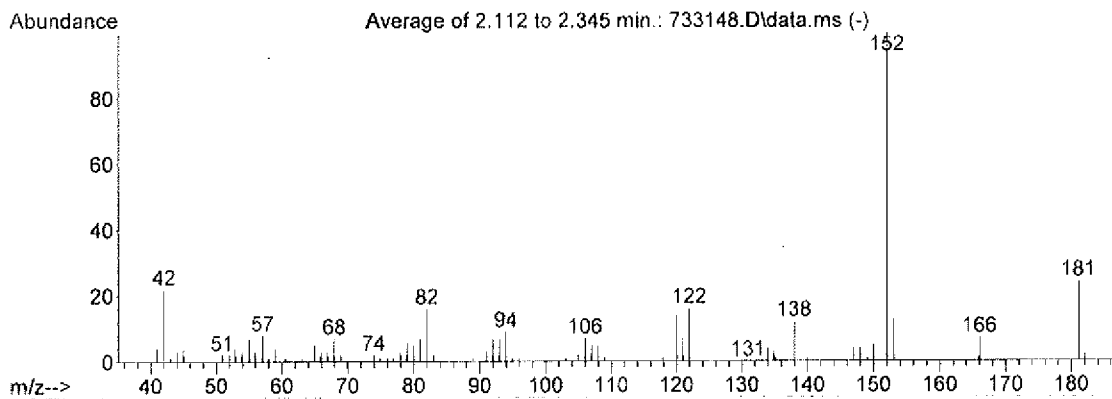
Search Libraries:   C:\Database\SLI.L            Minimum Quality: 80
                    C:\Database\NIST05a.L        Minimum Quality: 80
                    C:\Database\PMW_TOX2.L

| PK# | RT | Library/ID | CAS# | Qual |
|---|---|---|---|---|
| 1 | 4.74 | C:\Database\SLI.L<br>COCAINE | 000050-36-2 | 99 |



Average of 4.691 to 4.897 min.: 733147.D\data.ms (-)



#29: COCAINE

# Area Percent / Library Search Report

Information from Data File:
```
File Name      :  C:\msdchem\1\System7\07_26_10\733148.D
Operator       :  ASD
Date Acquired  :  26 Jul 2010   23:50
Sample Name    :  ███████████
Submitted by   :  MGL
Vial Number    :  48
AcquisitionMeth:  DRUGS.M
Integrator     :  RTE
```



TIC: 733148.D\data.ms

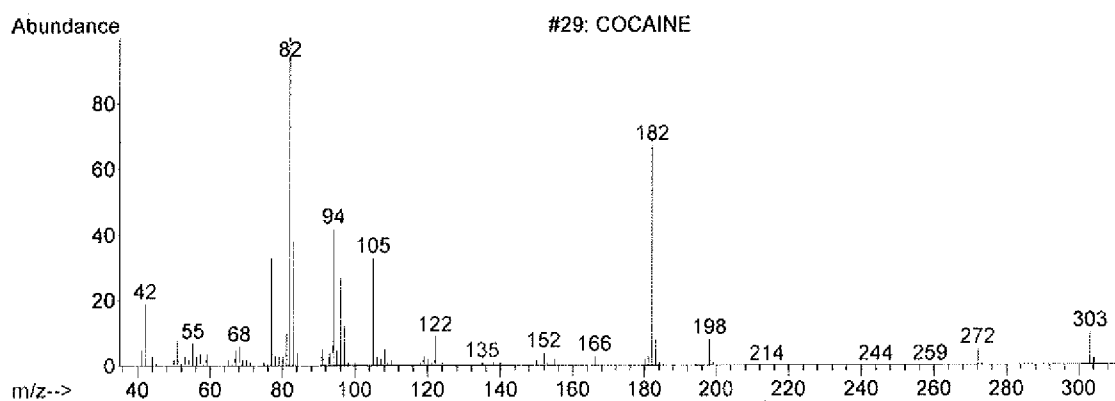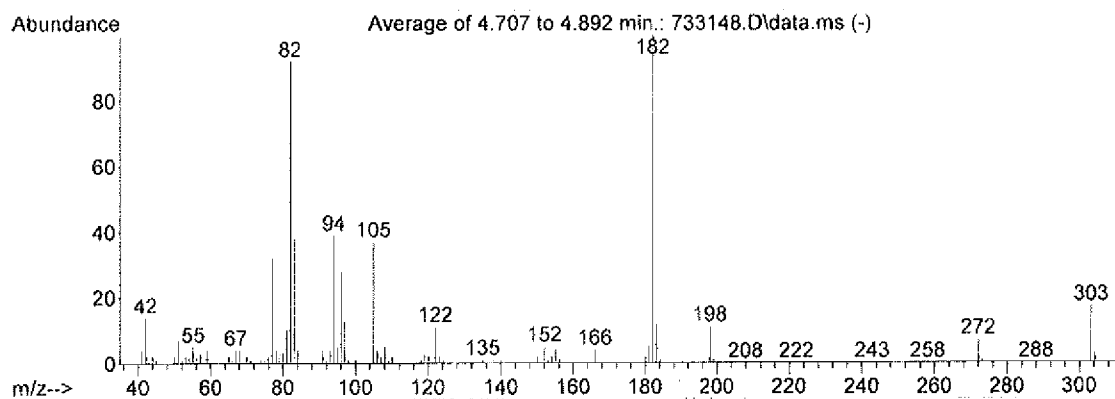| Ret. Time | Area | Area % | Ratio % |
|---|---|---|---|
| 2.154 | 106659 | 2.20 | 2.30 |
| 4.744 | 4641048 | 95.52 | 100.00 |
| 8.567 | 111251 | 2.29 | 2.40 |

# Area Percent / Library Search Report

Information from Data File:
File Name      : C:\msdchem\1\System7\07_26_10\733148.D
Operator       : ASD
Date Acquired  : 26 Jul 2010  23:50
Sample Name    : ███████████
Submitted by   : MGL
Vial Number    : 48
AcquisitionMeth: DRUGS.M
Integrator     : RTE

Search Libraries:   C:\Database\SLI.L              Minimum Quality: 80
                    C:\Database\NIST05a.L          Minimum Quality: 80
                    C:\Database\PMW_TOX2.L

| PK# | RT | Library/ID | CAS# | Qual |
|-----|-----|-----------|------|------|
| 1 | 2.15 | C:\Database\NIST05a.L | | |
| | | Ecgonidine, methyl ester | 127379-24-2 | 94 |
| | | 2-Carbomethoxy-8-methyl-8-azabicycl | 043021-26-7 | 70 |
| | | 2,6-Dimethoxytoluene | 005673-07-4 | 47 |

Average of 2.112 to 2.345 min.: 733148.D\data.ms (-)
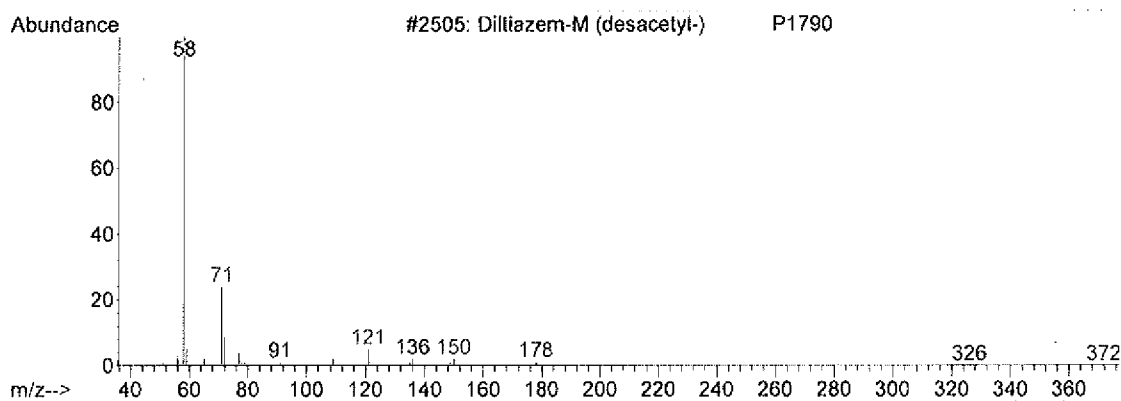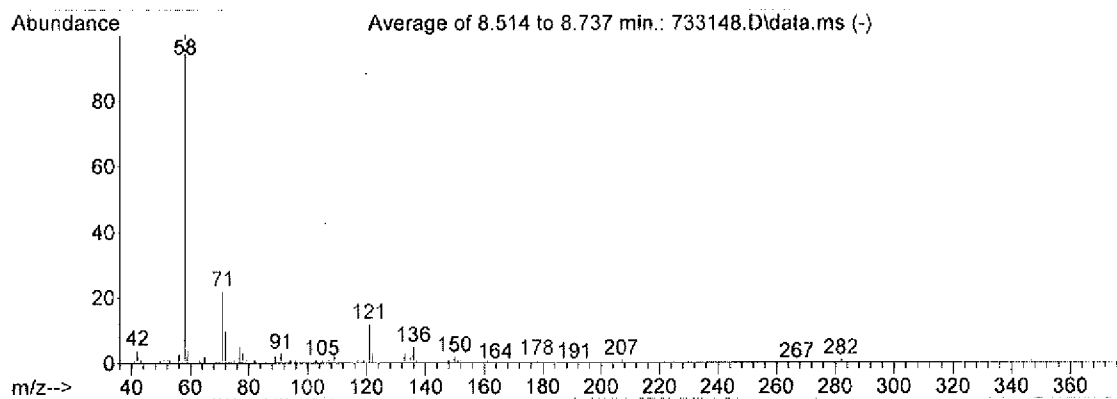
#43743: Ecgonidine, methyl ester

Information from Data File:
File Name       : C:\msdchem\1\System7\07_26_10\733148.D
Operator        : ASD
Date Acquired   : 26 Jul 2010   23:50
Sample Name     : ██████████
Submitted by    : MGL
Vial Number     : 48
AcquisitionMeth: DRUGS.M
Integrator      : RTE

---
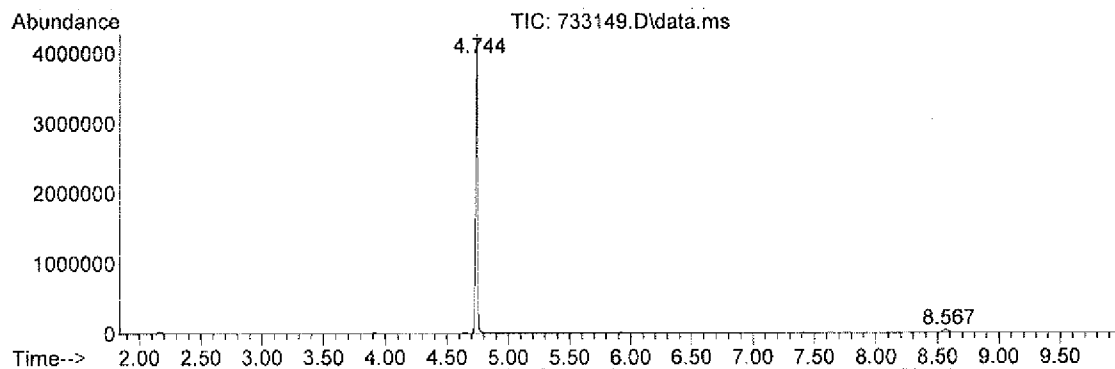
Search Libraries:    C:\Database\SLI.L            Minimum Quality: 80
                     C:\Database\NIST05a.L        Minimum Quality: 80
                     C:\Database\PMW_TOX2.L

| PK# | RT | Library/ID | CAS# | Qual |
|---|---|---|---|---|
| 2 | 4.74 | C:\Database\SLI.L | | |
| | | COCAINE | 000050-36-2 | 99 |

Abundance          Average of 4.707 to 4.892 min.: 733148.D\data.ms (-)



Abundance                        #29: COCAINE

Area Percent / Library Search Report

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Information from Data File:
File Name       : C:\msdchem\1\System7\07_26_10\733148.D
Operator        : ASD
Date Acquired   : 26 Jul 2010  23:50
Sample Name     : ███████████
Submitted by    : MGL
Vial Number     : 48
AcquisitionMeth : DRUGS.M
Integrator      : RTE

---

Search Libraries:   C:\Database\SLI.L            Minimum Quality: 80
                    C:\Database\NIST05a.L        Minimum Quality: 80
                    C:\Database\PMW_TOX2.L

| PK# | RT | Library/ID | CAS# | Qual |
|-----|-----|-----------|------|------|
| 3 | 8.57 | C:\Database\PMW_TOX2.L | | |
| | | Diltiazem-M (desacetyl-) | 000000-00-0 | 72 |
| | | Diltiazem | 042399-41-7 | 64 |
| | | Lidocaine-M (desethyl-) | 000000-00-0 | 40 |

Abundance          Average of 8.514 to 8.737 min.: 733148.D\data.ms (-)



Abundance          #2505: Diltiazem-M (desacetyl-)     P1790

# Area Percent / Library Search Report

Information from Data File:
```
File Name        : C:\msdchem\1\System7\07_26_10\733149.D
Operator         : ASD
Date Acquired    : 27 Jul 2010   00:02
Sample Name      : ███████████
Submitted by     : MGL
Vial Number      :  49
AcquisitionMeth: DRUGS.M
Integrator       : RTE
```
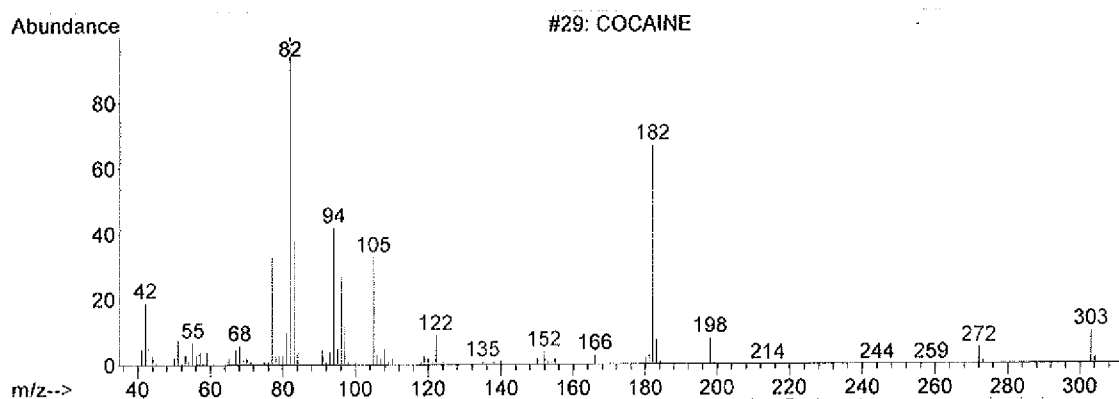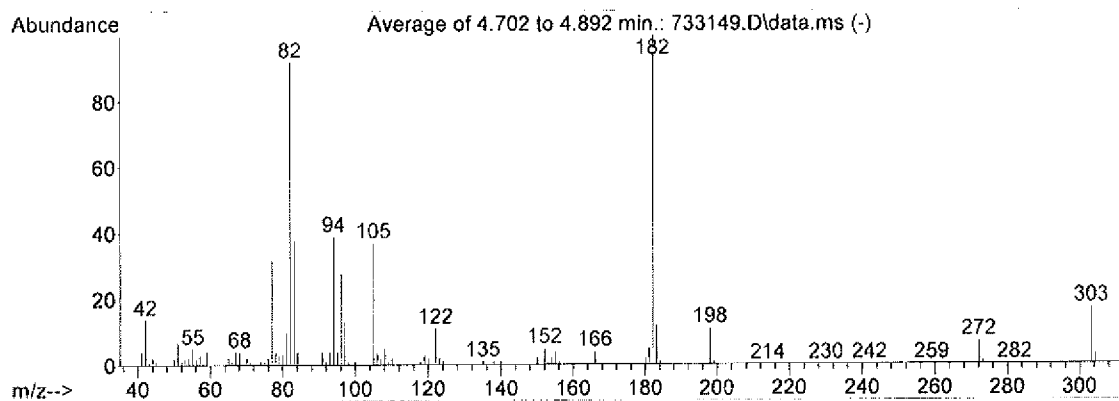


Abundance — TIC: 733149.D\data.ms

| Ret. Time | Area | Area % | Ratio % |
|-----------|---------|--------|---------|
| 4.744 | 4570177 | 97.07 | 100.00 |
| 8.567 | 138171 | 2.93 | 3.02 |

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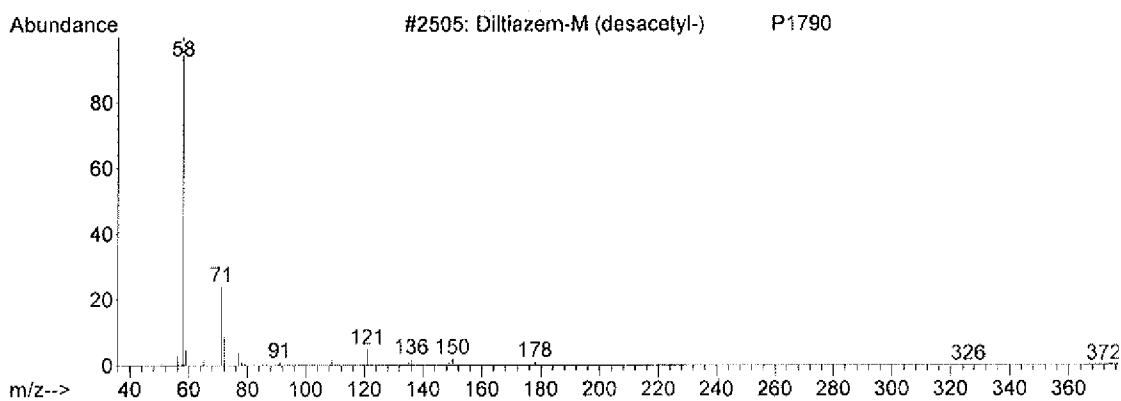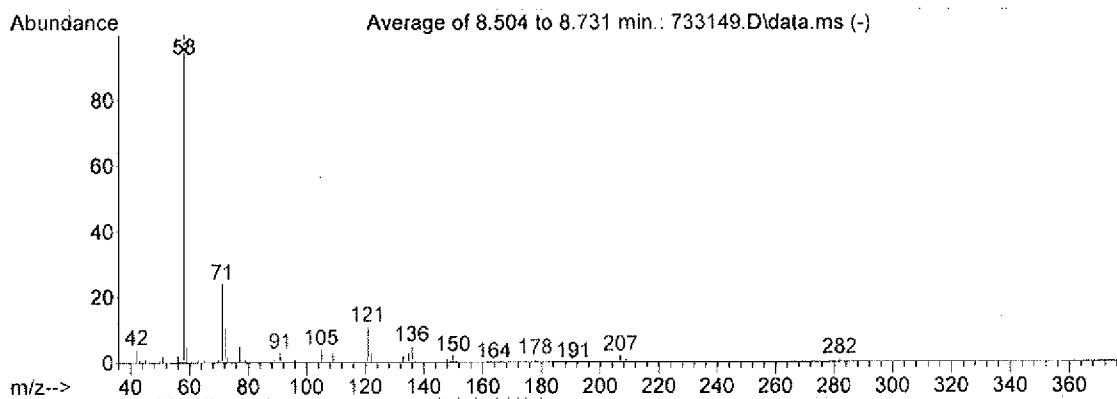
Information from Data File:
File Name       : C:\msdchem\1\System7\07_26_10\733149.D
Operator        : ASD
Date Acquired   : 27 Jul 2010   00:02
Sample Name     : ██████████
Submitted by    : MGL
Vial Number     : 49
AcquisitionMeth: DRUGS.M
Integrator      : RTE
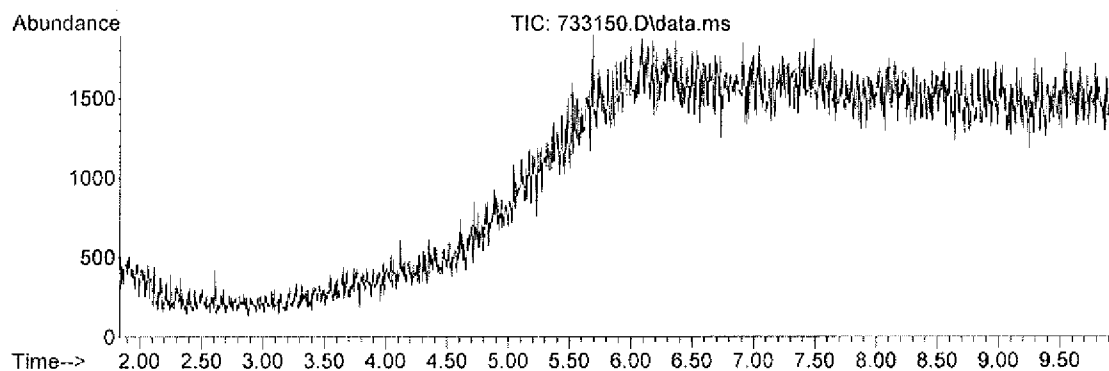
Search Libraries:   C:\Database\SLI.L            Minimum Quality: 80
                    C:\Database\NIST05a.L        Minimum Quality: 80
                    C:\Database\PMW_TOX2.L

| PK# | RT | Library/ID | CAS# | Qual |
|-----|-----|-----------|------|------|
| 1 | 4.74 | C:\Database\SLI.L COCAINE | 000050-36-2 | 99 |



Average of 4.702 to 4.892 min.: 733149.D\data.ms (-)



#29: COCAINE

Area Percent / Library Search Report

Information from Data File:
File Name      : C:\msdchem\1\System7\07_26_10\733149.D
Operator       : ASD
Date Acquired  : 27 Jul 2010   00:02
Sample Name    : ▮▮▮▮▮▮▮▮
Submitted by   : MGL
Vial Number    : 49
AcquisitionMeth: DRUGS.M
Integrator     : RTE

Search Libraries:  C:\Database\SLI.L          Minimum Quality: 80
                   C:\Database\NIST05a.L      Minimum Quality: 80
                   C:\Database\PMW_TOX2.L

| PK# | RT | Library/ID | CAS# | Qual |
|---|---|---|---|---|
| 2 | 8.57 | C:\Database\PMW_TOX2.L | | |
| | | Diltiazem-M (desacetyl-) | 000000-00-0 | 72 |
| | | Diltiazem-M (O-desmethyl-) AC | 000000-00-0 | 56 |
| | | Diltiazem | 042399-41-7 | 56 |


Average of 8.504 to 8.731 min.: 733149.D\data.ms (-)


#2505: Diltiazem-M (desacetyl-)    P1790

Information from Data File:
File Name     : C:\msdchem\1\System7\07_26_10\733150.D
Operator      : ASD
Date Acquired : 27 Jul 2010  00:15
Sample Name   : BLANK
Submitted by  : KAC
Vial Number   :   2
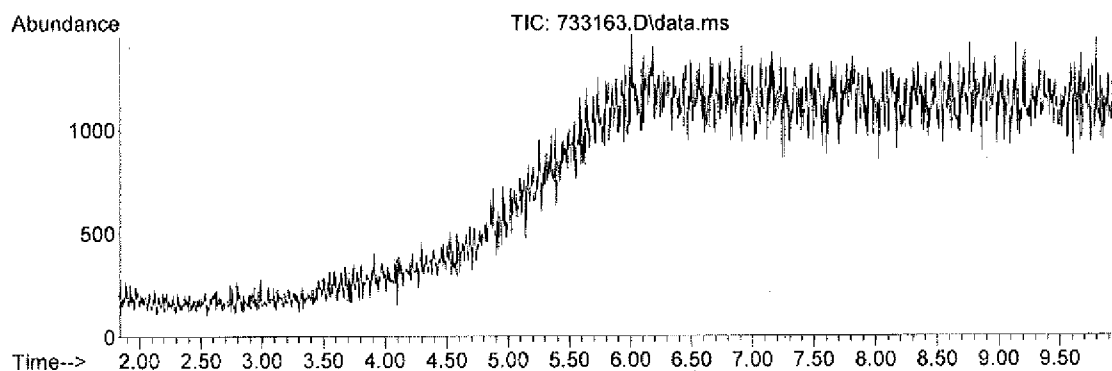AcquisitionMeth: DRUGS.M
Integrator    : RTE



| Ret. Time | Area | Area % | Ratio % |
|-----------|------|--------|---------|

***NO INTEGRATED PEAKS***

Information from Data File:
File Name      : C:\msdchem\1\System7\07_26_10\733163.D
Operator       : ASD
Date Acquired  : 27 Jul 2010    2:59
Sample Name    : BLANK
Submitted by   :
Vial Number    :    2
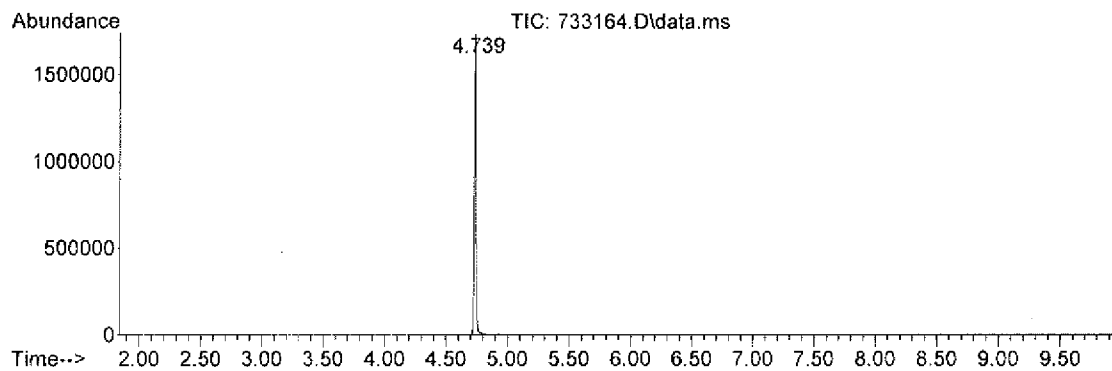AcquisitionMeth: DRUGS.M
Integrator     : RTE



Ret. Time              Area        Area %      Ratio %

***NO INTEGRATED PEAKS***

# Area Percent / Library Search Report

Information from Data File:
```
File Name        : C:\msdchem\1\System7\07_26_10\733164.D
Operator         : ASD
Date Acquired    : 27 Jul 2010   3:12
Sample Name      : COCAINE STD
Submitted by     :
Vial Number      :  64
AcquisitionMeth: DRUGS.M
Integrator       : RTE
```
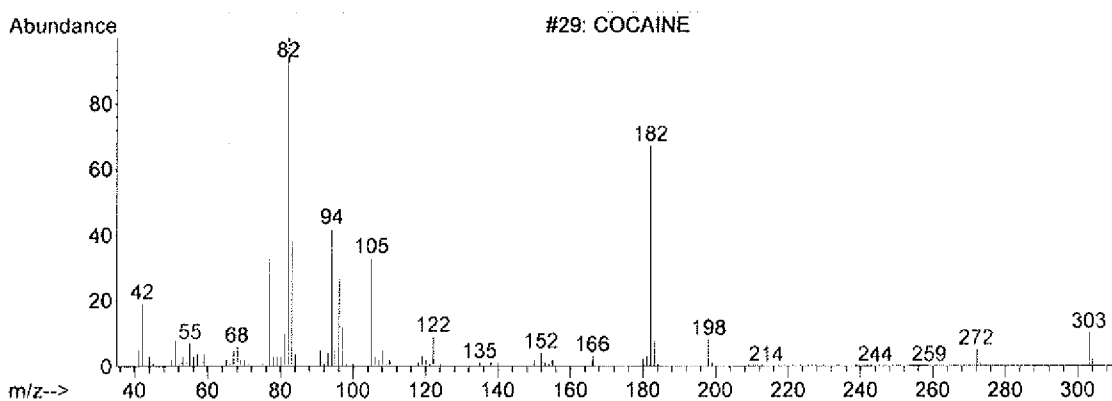
Abundance          TIC: 733164.D\data.ms



| Ret. Time | Area | Area % | Ratio % |
|-----------|------|--------|---------|
| 4.739 | 1646815 | 100.00 | 100.00 |

Information from Data File:
File Name      : C:\msdchem\1\System7\07_26_10\733164.D
Operator       : ASD
Date Acquired  : 27 Jul 2010    3:12
Sample Name    : COCAINE STD
Submitted by   :
Vial Number    :  64
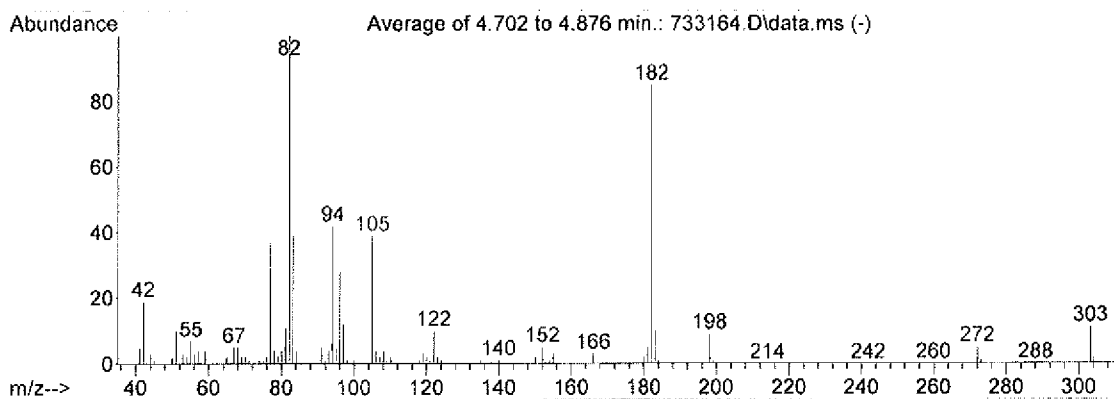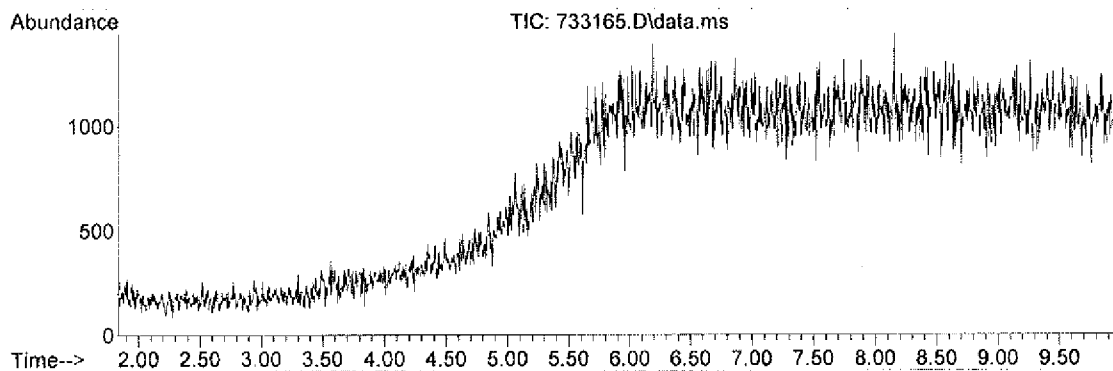AcquisitionMeth: DRUGS.M
Integrator     : RTE

Search Libraries:    C:\Database\SLI.L              Minimum Quality: 80
                     C:\Database\NIST05a.L          Minimum Quality: 80
                     C:\Database\PMW_TOX2.L

| PK# | RT | Library/ID | CAS# | Qual |
|-----|-----|-----------|------|------|
| 1 | 4.74 | C:\Database\SLI.L COCAINE | 000050-36-2 | 99 |



Average of 4.702 to 4.876 min.: 733164.D\data.ms (-)



#29: COCAINE

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**Corbett_email_PRR_011451**

# Area Percent / Library Search Report

Information from Data File:
File Name      : C:\msdchem\1\System7\07_26_10\733165.D
Operator       : ASD
Date Acquired  : 27 Jul 2010   3:24
Sample Name    : BLANK
Submitted by   : ASD
Vial Number    :   2
AcquisitionMeth: DRUGS.M
Integrator     : RTE



| Ret. Time | Area | Area % | Ratio % |
|---|---|---|---|

***NO INTEGRATED PEAKS***

*Last page…… …no further data*